

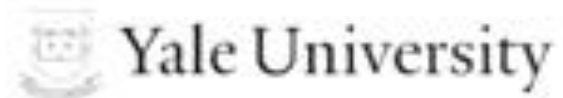
Achieving a Healthy Weight



Weight Bias Video

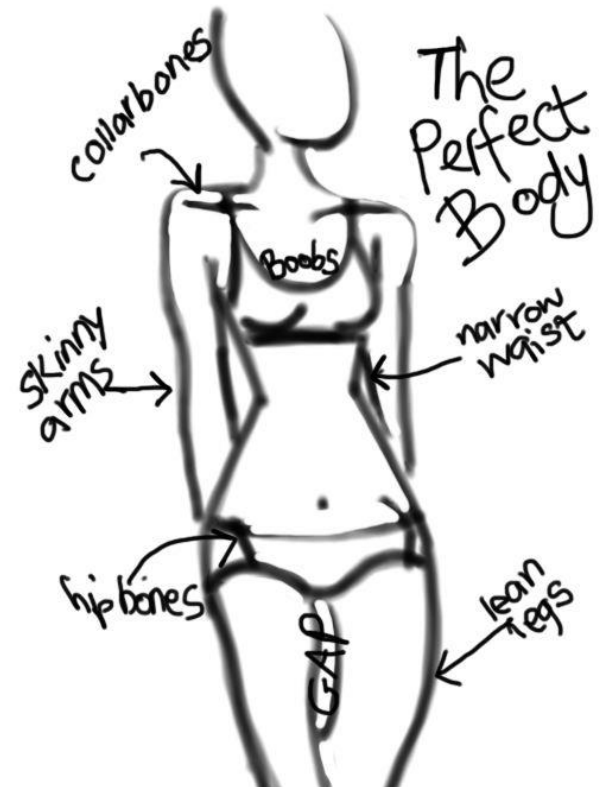


RUDD CENTER
For Food Policy & Obesity



Healthy Weight

- ◆ At any given time, more than one-half of women and one-fourth of men are on a diet
- ◆ For some people the weight obsession can lead to difficulty forming a healthy and realistic body-image, including body dysmorphic disorder (BDD)



Example of Body Dysmorphic Disorder?



Obesity

- ◆ Obesity increases morbidity and death occurs at an earlier age
- ◆ A BMI of 18.5 – 24.9 = healthy weight
- ◆ According to the 2015 National Health and Nutrition Examination Survey (NHANES) data:
 - 70.7% of adults are overweight
 - 37.9% of adults are clinically obese (BMI > 30)



Complications of Obesity

- ◆ Coronary heart disease
- ◆ Stroke
- ◆ Hypertension
- ◆ LDL cholesterol
- ◆ Diabetes



- ◆ Psychological distress
- ◆ Gallbladder disease
- ◆ Osteoarthritis
- ◆ Sleep apnea
- ◆ Some cancers

Development of Obesity

- ◆ Obesity occurs when the 30 to 40 million adipose (fat) cells in the body increase in size (hypertrophy), number (hyperplasia), or both
- ◆ Most obesity is adult-onset and is caused by hypertrophy
- ◆ Males and females store fat differently
 - Males– upper half of body (android)
 - Females– lower half of body (gynoid)
- ◆ Biological factors that influence obesity are age, metabolism, gender, disease, heredity, and set point

Causes of Obesity

- ◆ Heredity influences both body weight and body shape
 - Ectomorph
 - Endomorph
 - Mesomorph
- ◆ 80% of children born to two obese parents will themselves be obese
- ◆ 40% of children born to one obese parent will be obese
- ◆ 14% of children born to non-obese parents will be obese



HBO – The Weight of the Nation



www.youtube.com/watch?v=e26JKMpSNSo&hd=1

Set Point Theory

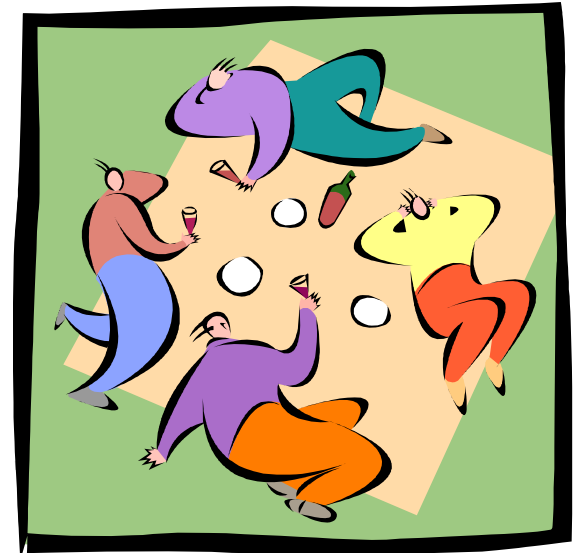
- ◆ This theory suggests that the body has an internal 'set point', sometimes called an adipostat, that works to maintain a certain weight no matter what a person does
- ◆ Subjects put on a low calorie or high calorie diet lose or gain weight only to a certain level
- ◆ Metabolism increases with weight gain and decreases with weight loss in order to maintain the 'set point'
- ◆ Eating a high-fat diet tends to raise the set point for fatness, and regular physical exercise induces the body to stabilize at a lower body weight

Overeating

- ◆ Some experts view high dietary fat intake as the major factor in obesity
- ◆ Some obese people eat no more total calories than normal weight people, it is just that a higher percentage of their diet is from fat
- ◆ Calories from fat convert to body fat more readily than calories from carbohydrates – the thermogenic effect of food (TEF)
 - 3 calories to process 100 calories of fat vs.
 - 25 calories to process 100 calories of carbohydrate
- ◆ Excessive calories AND fat can lead to weight gain

Overeating and Inactivity

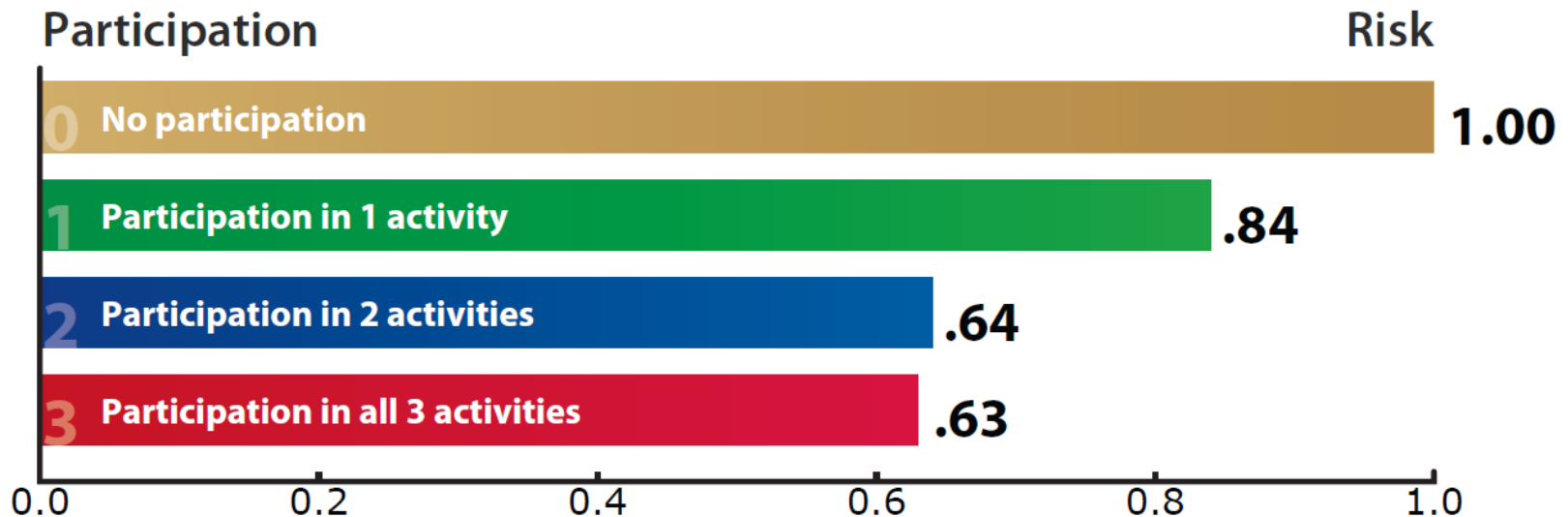
- ◆ People cannot eat as much as they want to just because a food is fat free
- ◆ A sedentary lifestyle is partially responsible for the obesity in America
- ◆ Modern conveniences and labor-saving devices have resulted in less physical activity
- ◆ The lack of physical activity in children is especially alarming as obese children tend to become obese adults



Obese children may become obese adults



3 Ways to Prevent Childhood Obesity



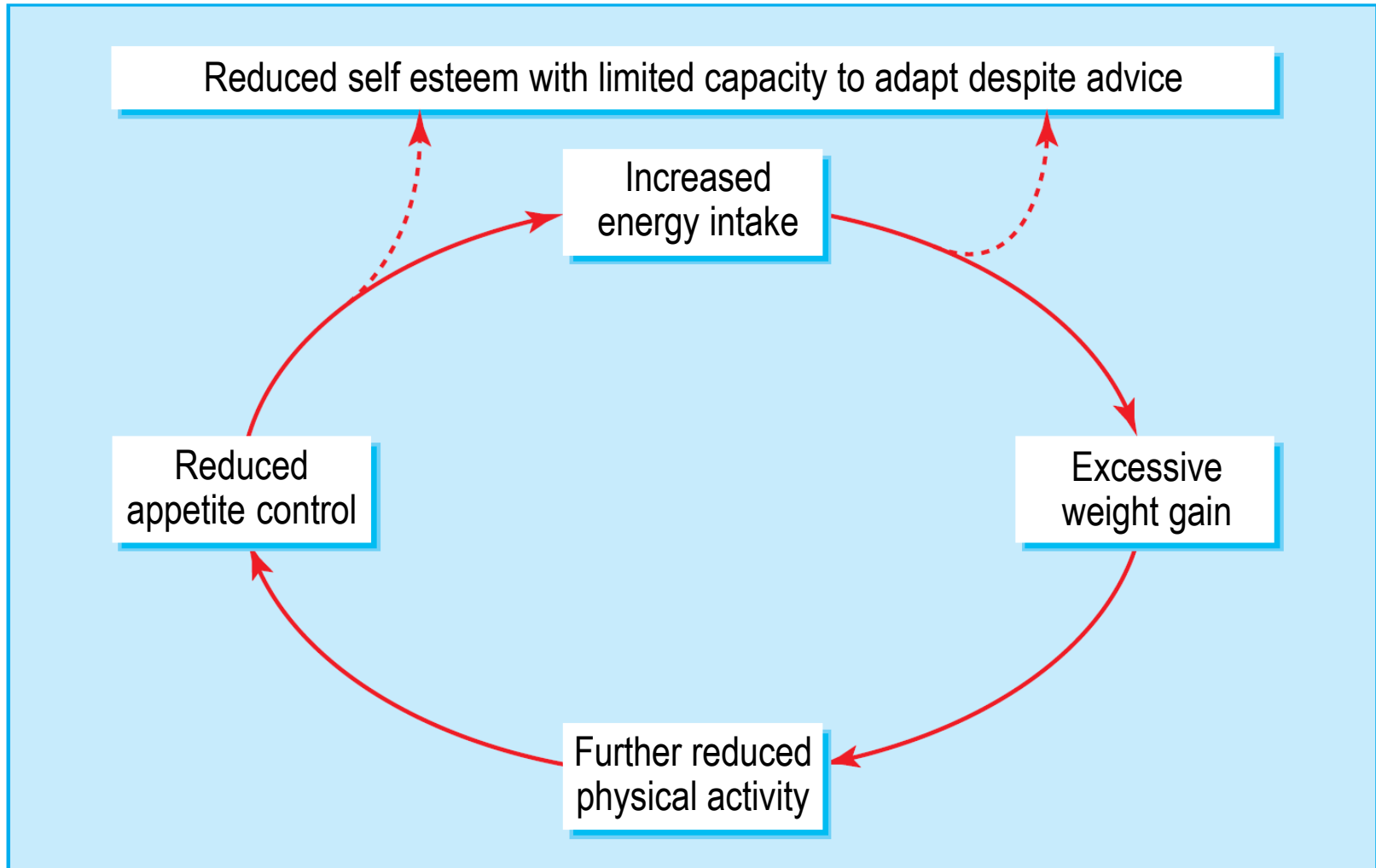
Researchers have established that for preschoolers, sufficient sleep (at least 10.5 hours per night), minimal TV viewing (2 or less hours per day) and regular family meals (more than 5 nights per week) are three important factors in reducing childhood obesity.

Inactivity

- ◆ Some experts view lack of physical activity as the distinguishing factor that separates the obese from those of normal weight
- ◆ Exercise alone is not a major component in weight loss, but it is the most important component in weight gain
- ◆ Aerobic exercise facilitates weight loss



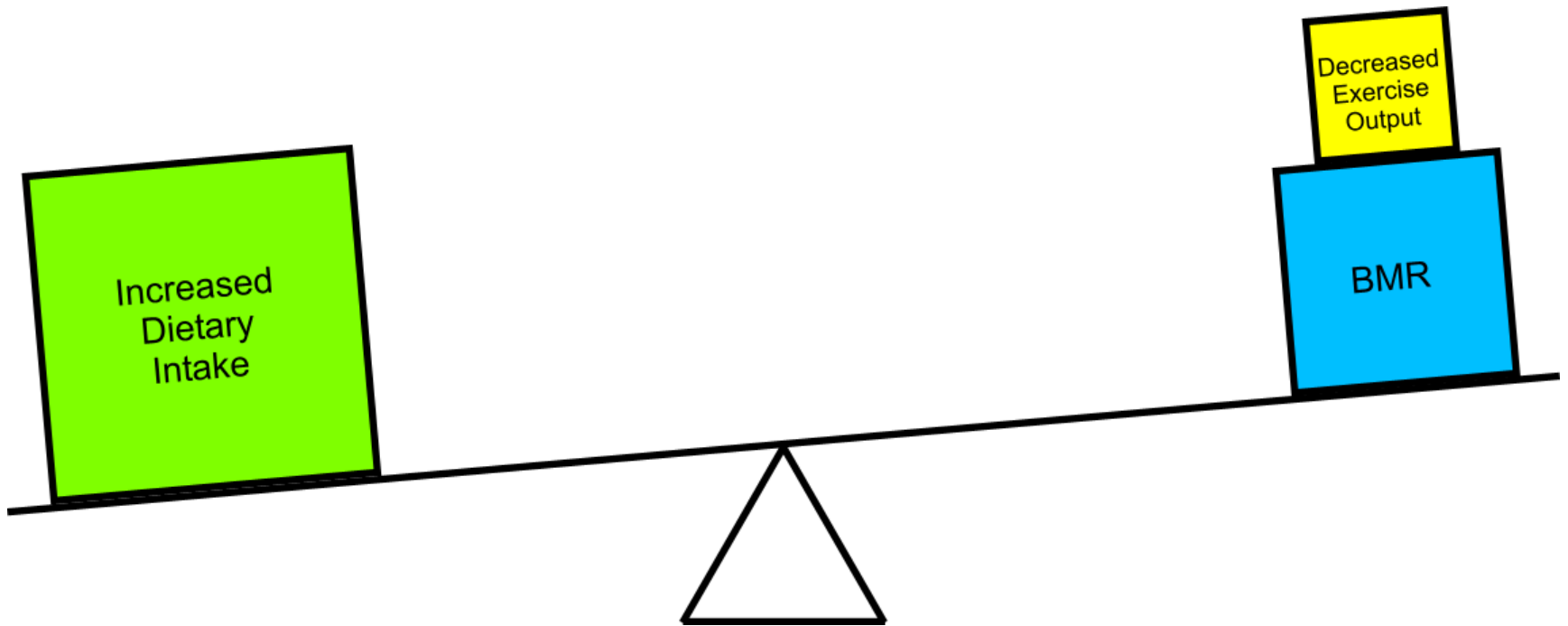
The Vicious Cycle of Weight Gain



Weight Management Strategies

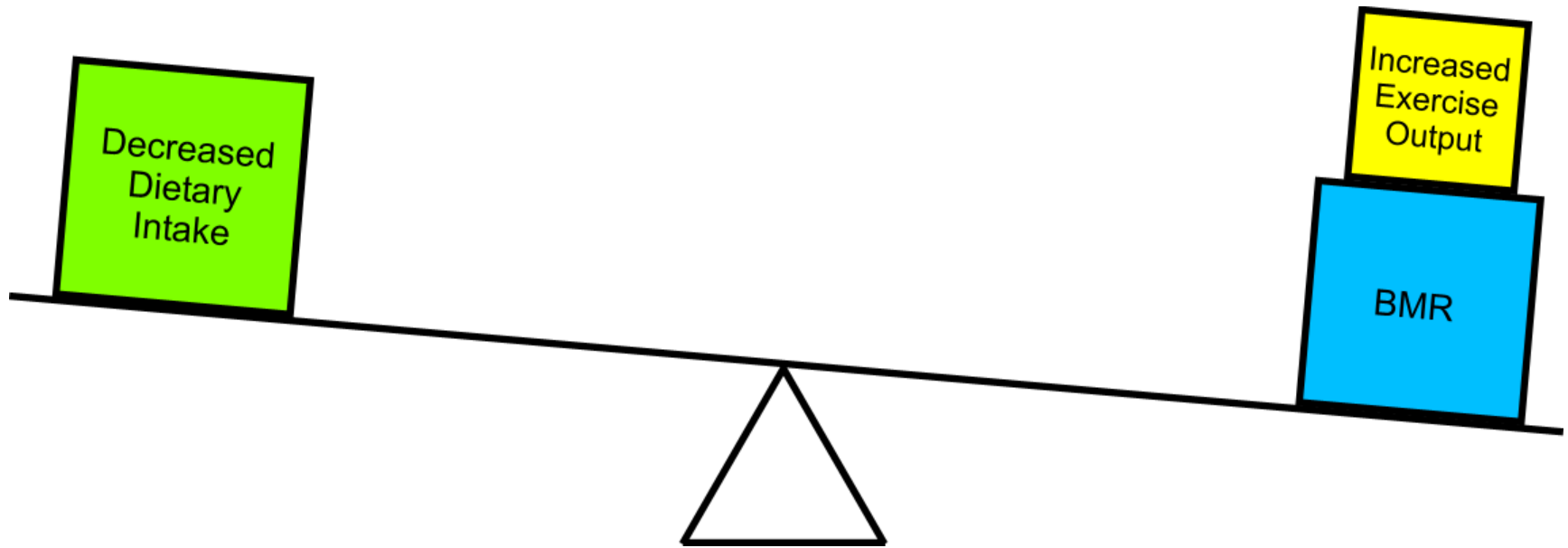
- ◆ The loss of one pound of body fat requires a deficit of 3500 calories
- ◆ A desirable long-term goal for losing weight is 1 to 2 pounds a week until 10% of total body weight is lost
- ◆ A six-month maintenance program should follow weight loss before losing more
- ◆ Weight loss should be a combination of restricting calories and increasing caloric expenditure

Weight Gain



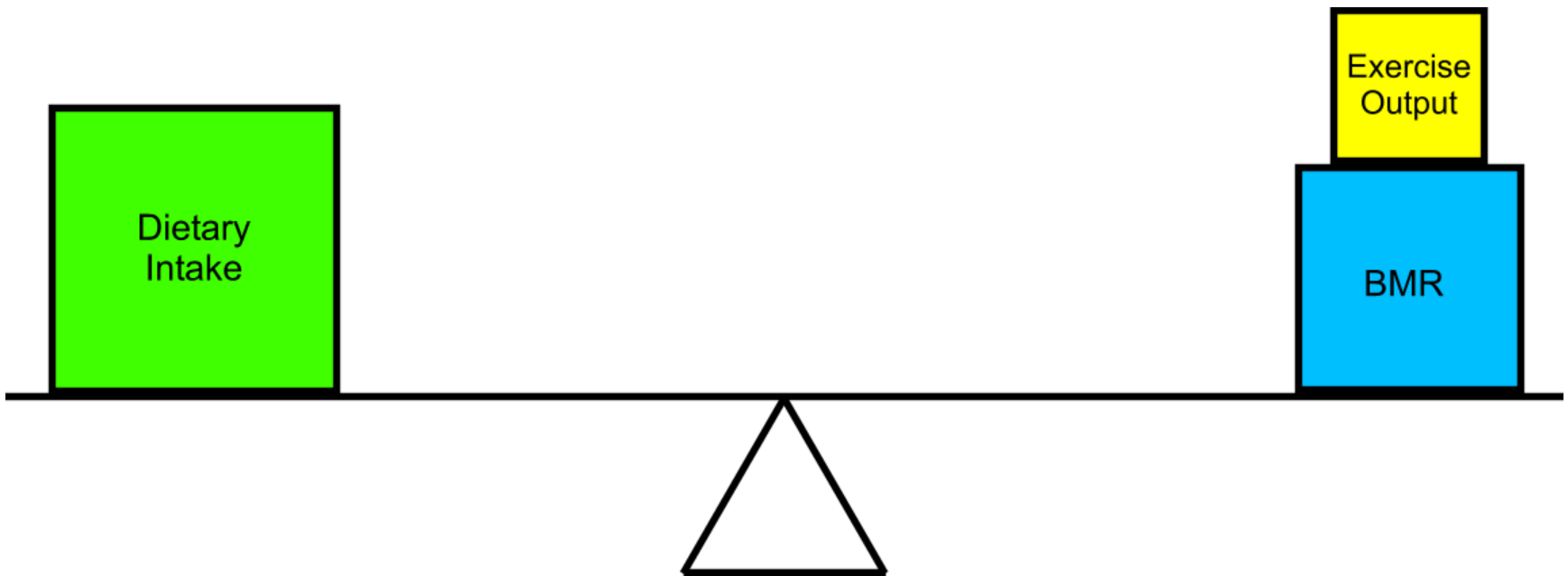
Dietary Intake $>$ BMR + Exercise Output

Weight Loss



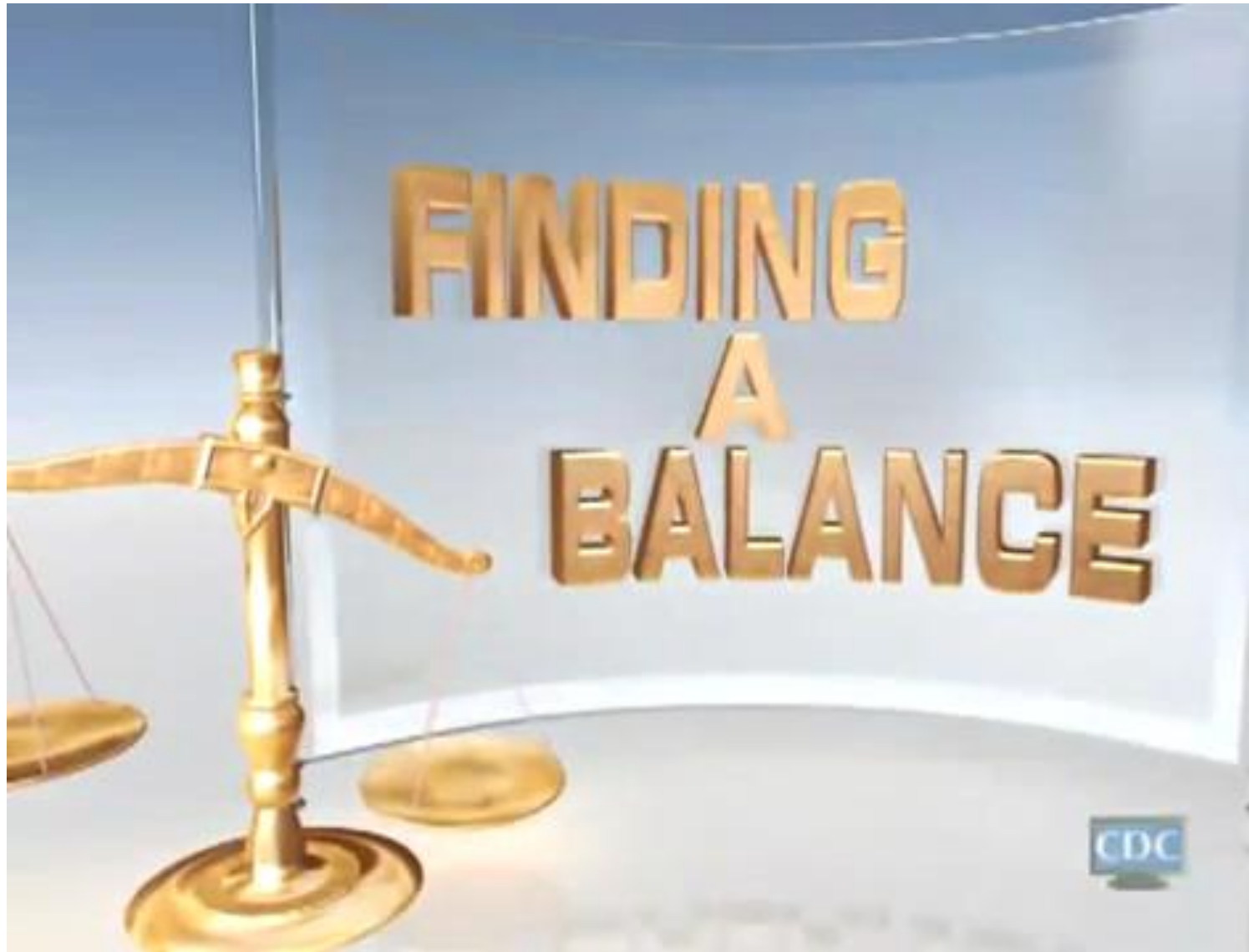
Dietary Intake < BMR + Exercise Output

Metabolic Balance



$$\text{Dietary Intake} = \text{BMR} + \text{Exercise Output}$$

CDC-TV on Finding the Balance



<http://www.youtube.com/watch?v=1DloJanE-OQ&hd=1>

Weight Management Strategies

- ◆ Most people choose dieting as the means to lose weight
- ◆ Only 5% of dieters successfully lose and maintain their weight loss for five years
- ◆ Weight cycling (yo-yo dieting) usually results in a greater weight gain following a loss period and increases the risk of death



Diets Don't Work

- ◆ You can initially lose 5–10% of your weight on any number of diets, but then the weight comes back.
- ◆ Diet studies of less than two years are too short to show whether dieters have regained the weight they lost. Even when you follow dieters four years, they're still regaining weight, usually more than their original weight.

Diets Don't Work



Fed up with how her diet is going, Charlene takes a more serious aim at her target weight



Weight loss this fast is too fast

Diets Don't Work

- ◆ Several studies indicate that dieting is actually a consistent predictor of future weight gain.
- ◆ Most people would have been better off not going on the diet at all. Their weight would be pretty much the same, and their bodies would not suffer the wear and tear from losing weight and gaining it all back.

National Weight Control Registry

Strategies used by successful dieters:

- 78% eat breakfast every day
- 75% weigh themselves at least once a week
- 62% watch less than 10 hours of TV per week
- 90% exercise, on average, about 1 hour per day, with walking being the most frequently reported form of activity



Emphasize Positive Action

- ◆ INCREASE fiber and complex carbohydrates
- ◆ INCREASE servings of fruits and vegetables
- ◆ INCREASE water intake to 8 glasses a day
- ◆ Take a brisk 10 minute walk 3 times a day, 5 days a week

Positive action is the only appropriate response to a negative thought



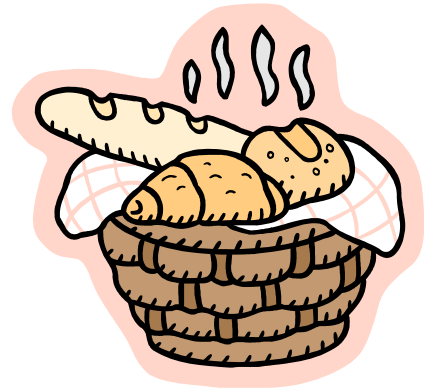
Weight Management Strategies

- ◆ Caloric intake should not drop below 1200 per day for women or 1500 per day for men
- ◆ Very-low-calorie diets (VLCDs) have fewer than 800 calories a day and should be viewed as medical intervention
- ◆ Americans are consuming fewer fat calories but more total calories and are getting heavier



Weight Management Strategies

- ◆ Overcompensatory eating is when the consumption of low-fat foods leads to an increase in total calories
- ◆ Increases in portion sizes of foods in restaurants and in the grocery contribute to greater food consumption
- ◆ Diet drugs offer only a temporary solution and side effects can be deadly



Weight Management Strategies

- ◆ Herbal remedies are unregulated and when taken in large, concentrated doses should be viewed as drugs
- ◆ The optimal approach to weight loss combines mild caloric restriction with regular physical activity
- ◆ Physical activity and dieting should yield a daily caloric deficit of about 500 calories



Physical Activity

- ◆ Basal metabolic rate (BMR) is the energy required to sustain life when the body is rested and fasting
- ◆ BMR typically amounts to about 70–75% of daily caloric expenditure
- ◆ Increased muscle tissue raises BMR
- ◆ People who lose weight and keep it off almost always exercise daily
- ◆ Low intensity exercise burns more fat calories

Basal Metabolic Rate

- ◆ About 70% of a human's total energy expenditure is due to the basal life processes within the organs of the body
- ◆ About 20% of one's energy expenditure comes from physical activity
- ◆ About 10% of energy expenditure comes from thermogenesis and digestion of food

Note: If you advise your patient to limit their caloric intake to the BMR, you are actually putting them on a CRASH diet.

Eating Disorders

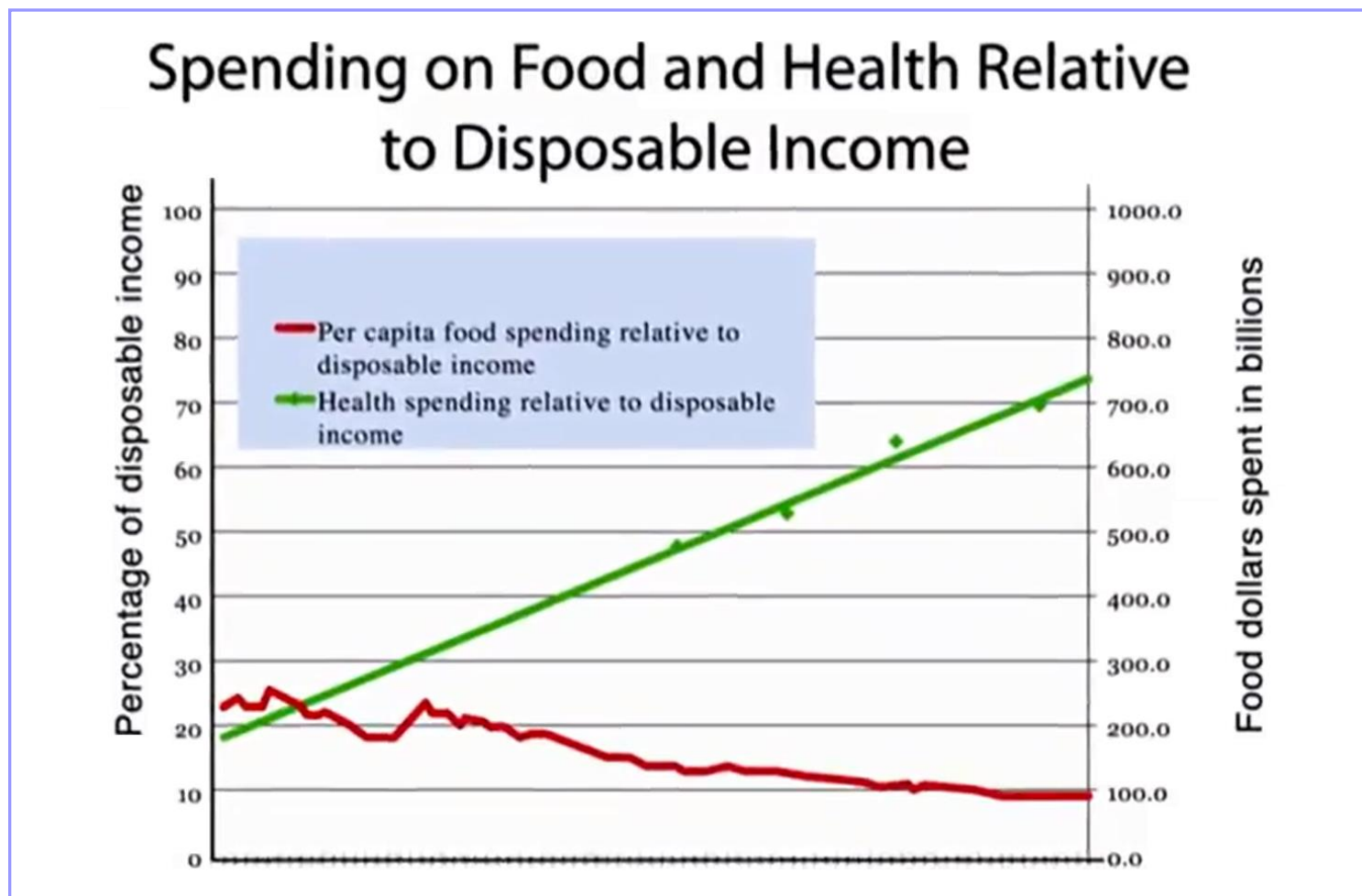
- ◆ Anorexia nervosa is the refusal to maintain minimally normal weight for age and height. It is characterized by the refusal to eat.
- ◆ Bulimia nervosa (bulimia) alternates bingeing (uncontrolled consumption of large amounts of food in a 1 – to 2-hour period) with purging (vomiting supplemented with laxatives and diuretics).
- ◆ Female Athlete Triad: Disordered eating, Amenorrhea, Osteoporosis

Michael Pollan on Nightline



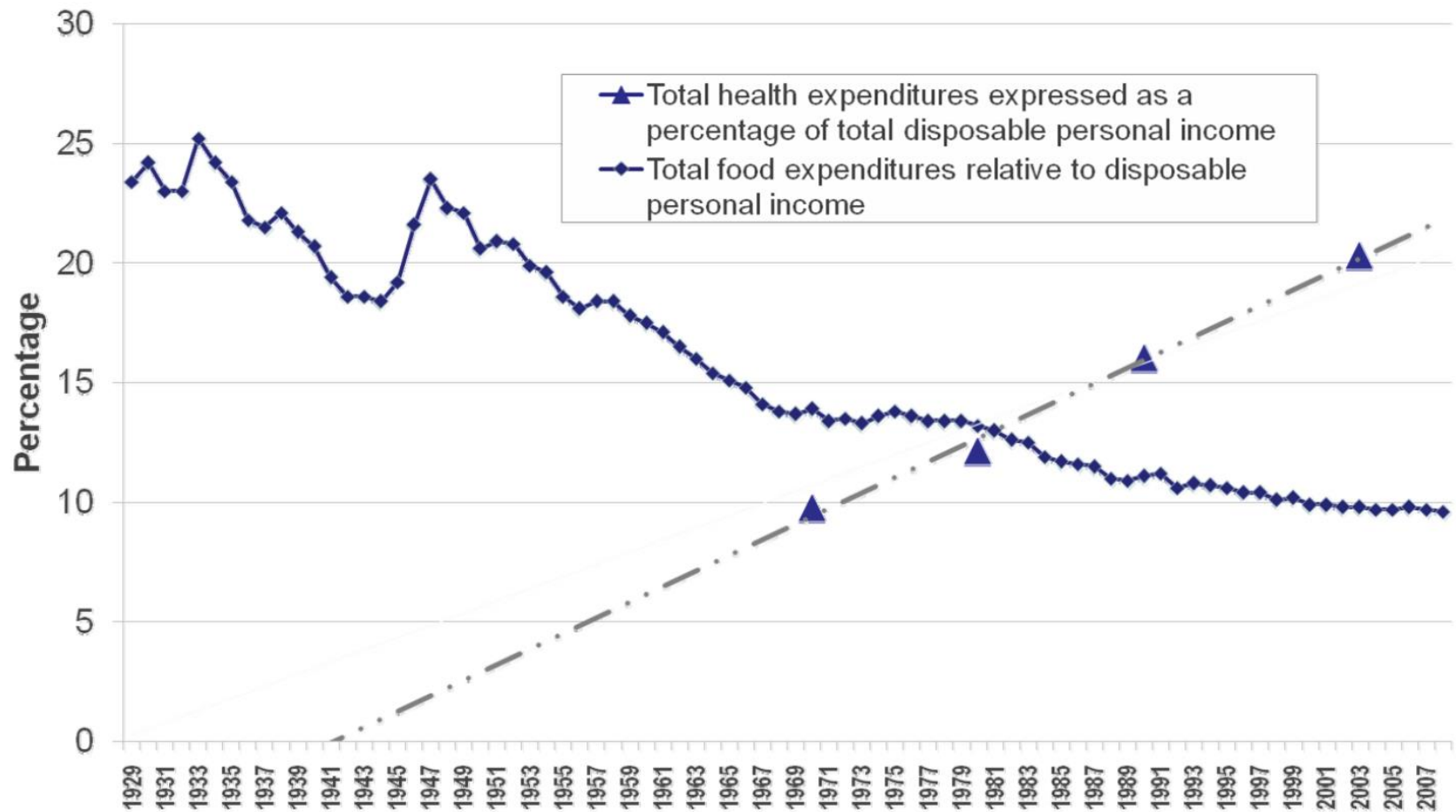
<https://www.youtube.com/watch?v=OGEAINNISlw>

HBO – The Weight of the Nation



www.youtube.com/watch?v=6a6FEL1JHpg&hd=1

Spending on Food and Health Relative to Disposable Income



HBO – The Weight of the Nation

Despite a surge in recent years,
the sale of local fruits and
vegetables comprises only 2% of
all U.S. agricultural sales



HBO – The Weight of the Nation



www.youtube.com/watch?v=Ob0MGZ95AyA&hd=1

Health Implications for 21st Century Diet

72% * of the foods we currently consume are food items that were not available to our ancestors 10,000 years ago:

♦ Dairy products	10.6%
♦ Cereal grains	23.9%
♦ Refined sugar	18.6%
♦ Refined vegetable oil	17.6%
♦ Alcohol	1.4%

* Percent of total daily energy consumed in the US

Health Implications for 21st Century Diet

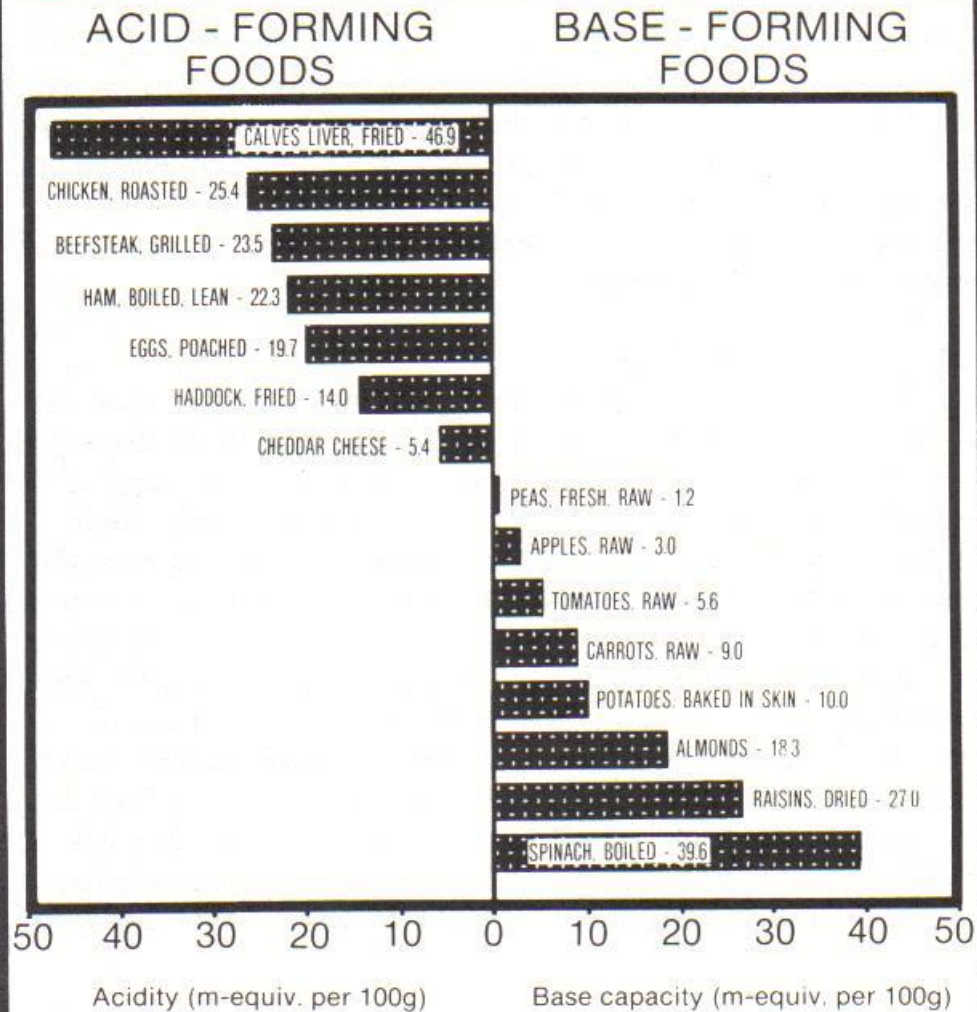
These foods adversely influence nutritional factors which underlie or exacerbate virtually all chronic diseases of civilization:

1. Glycemic load
2. Fatty acid composition
3. Macronutrient composition
4. Micronutrient density
5. Acid–base balance
6. Sodium–potassium ratio
7. Fiber content

Acid/Alkaline balance

- ◆ The typical American diet is high in foods that cause our bodies to become acidic
- ◆ Too much acidity allows yeast, viruses, cancer, and parasites to thrive
- ◆ Acidity can also lead to chronic fatigue, arthritis, and allergies
- ◆ Acid forming foods: meat, sugar, grains
- ◆ Alkaline forming foods: most fruits and vegetables

ACID AND BASE FORMING CAPACITIES OF SELECTED FOODS



Source: McCance, R.A., and Widdowson, E.M., *The Composition of Foods*,
pgs. 22 and 124, Her Majesty's Stationery Office, 1960

Organic vs. Conventional

- ◆ In addition to not containing pesticides and synthetic fertilizer, organic food contains:

Calcium	63% higher
Chromium	78% higher
Iodine	73% higher
Iron	59% higher
Magnesium	138% higher
Potassium	125% higher
Selenium	390% higher
Zinc	60% higher

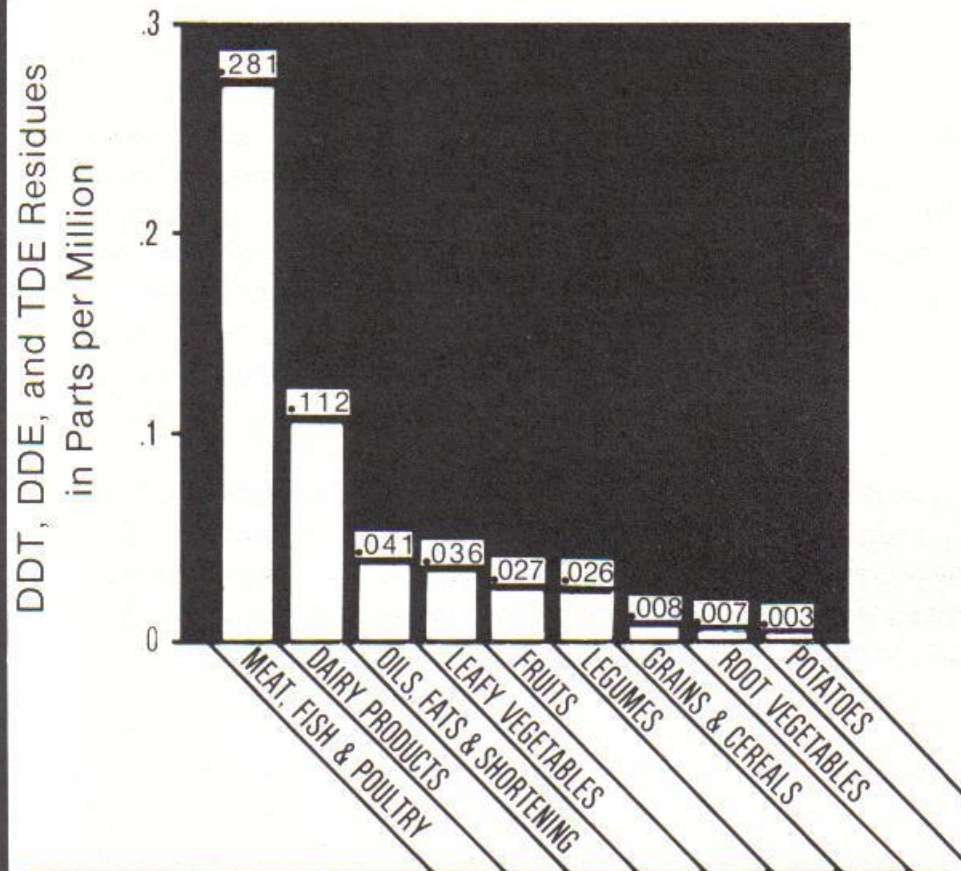
Organic vs. Conventional

- ◆ There are nutrients and minerals which human beings need, but plants do not.
- ◆ Soil fertilized synthetically may produce a healthy appearing plant, but this plant does not contain all the nutrition that humans need.
- ◆ For example iodine, chromium, selenium, and cobalt are essential to humans, but are not needed by plants.

Organic vs. Conventional

- ◆ From Joe Mercola: If your funds are limited and you are a meat eater, buy organic meat.
- ◆ Commercially grown meat will probably contain antibiotics and bovine growth hormone. While this helps the cow to gain weight, it is not good for the human who eats that meat.
- ◆ Cows that are fed grain in feed lots will concentrate in their flesh any pesticides which were present in the commercial animal feed.

PESTICIDE RESIDUES IN THE U.S. DIET



1964-68 Levels of DDT, DDE and TDE

Data derived from: Cornellussen, P.E., "Pesticide Residues in Total Diet,"
Pesticides Monitoring Journal, 2:140-152, 1969

Eat Right 4 Your Type

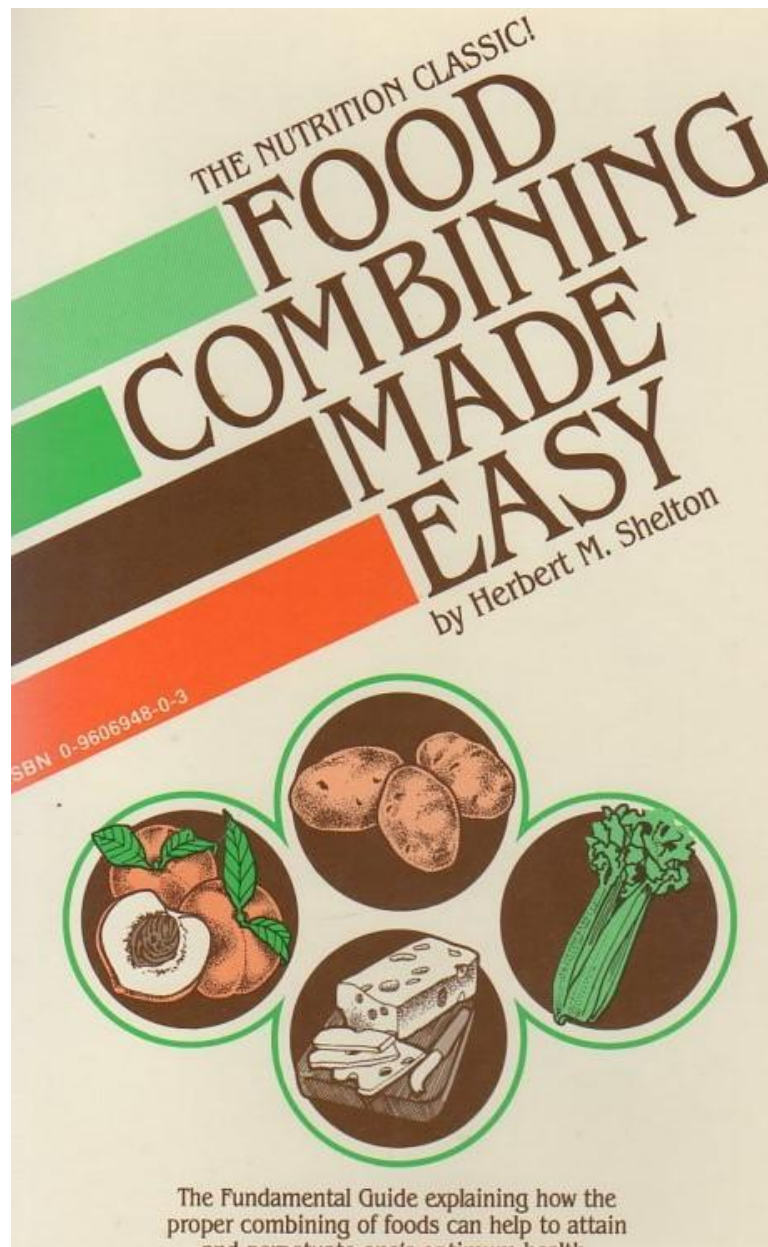
- ◆ Peter D'Adamo popularized the theory that that lectins in foods react differently with each ABO blood type
- ◆ Blood type O (the hunter)
 - Meat eater – does better with high protein
- ◆ Blood type A (the cultivator)
 - Does better with vegetarian diet
- ◆ Blood type B (the nomad)
 - Balanced omnivore and can handle dairy

Food Combining

- ◆ Eat fruits alone and on an empty stomach
- ◆ Eat protein with green non-starch vegetables
- ◆ Eat grains and starch vegetables with green vegetables
- ◆ Do not mix protein with starch
- ◆ Desert the desserts



Poor combination
Protein + starch



A PDF of this book is available online:

<http://www.soilandhealth.org/02/0201hyglibcat/020195.shelton.combining.pdf>

Healthy Eating for Life

- ◆ Diets don't work. After the diet is over most people return to their unhealthy eating habits.
- ◆ Instead change to the healthy food choices you will need to eat for the rest of your life.
- ◆ These healthy food choices will almost always be less calories than your previous unhealthy food choices.
- ◆ With these healthy foods, combined with increased physical activity, you will have the approximate 500 calorie per day loss (one pound per week) that is safe.

Other General Guidelines

- ◆ Eat only when hungry
- ◆ Eat until your hunger is satisfied, not until you are full
- ◆ Eat until your stomach is 80% full, leaving 20% free for digestion
- ◆ Eat several small meals in preference to a few large meals
- ◆ Don't skip breakfast and eat your larger meals earlier in the day
- ◆ Never eat 3–4 hours before bedtime

Skipping breakfast may increase CHD

- ◆ A large 16-year study finds men who reported that they skipped breakfast had higher risk of heart attack or death from coronary heart disease.
- ◆ The timing of meals, whether it's missing a meal in the morning or eating a meal very late at night, may cause adverse metabolic effects that lead to coronary heart disease.
- ◆ Even after accounting for modest differences in diet, physical activity, smoking and other lifestyle factors, the association between skipping breakfast (or eating very late at night) and coronary heart disease persisted.

Other General Guidelines

- ◆ Drink plenty of water between meals
- ◆ Chew food well
- ◆ Eat slowly in a relaxed unhurried atmosphere
- ◆ Never eat when emotionally upset or in physical pain
- ◆ Rotate specific foods to once every four days, especially if you have allergies
- ◆ Keep healthy snacks available: carrot sticks, rice cakes, etc.